

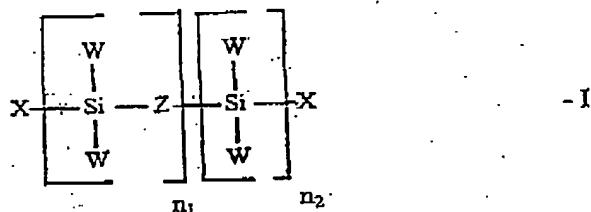
Application No. 09/762,765
 Amdt. dated 12-21-04
 Reply to Office Action of 09-22-04

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Amendments to the Claims:

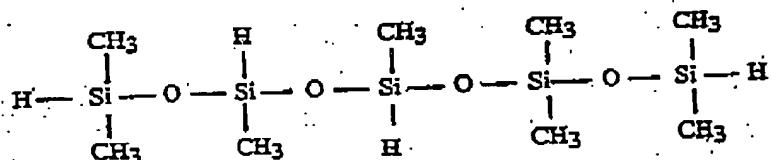
1. (Cancelled)

2. (Currently amended) The process copolymer of claim 21 claim 1 wherein said silicone polymer is a polysilane of the Formula I:



wherein X is an organic end group, W is an organic or inorganic group, with X and W being selected such that the polysilane contains at least two Si-H groups and sufficient to provide a branched structure, and n₁ and n₂ are the number of repeating groups in the chain.

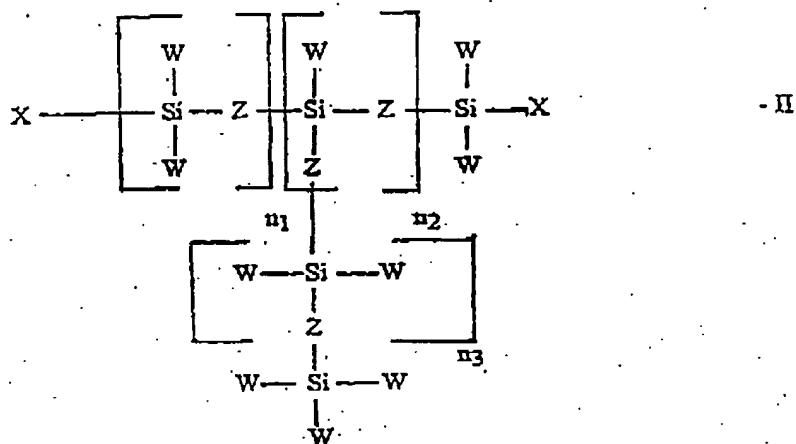
3. (Currently amended) The process copolymer of claim 2 wherein said polysilane of formula I is a polyhydrosiloxane of the formula:



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4. (Currently amended) The process copolymer of claim 21 claim 1 wherein said silicone polymer is a polysilane of the Formula II:

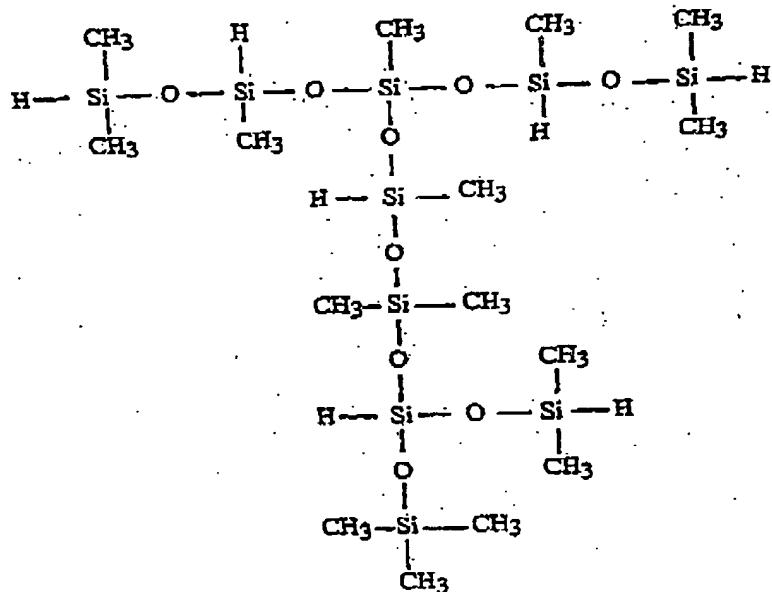


wherein X is an organic end group, W is an organic or inorganic group, with X and W being selected such that the polysilane contains at least two Si-H groups and sufficient to provide a branched structure, and n_1 , n_2 and n_3 are the number of repeating groups in the chain.

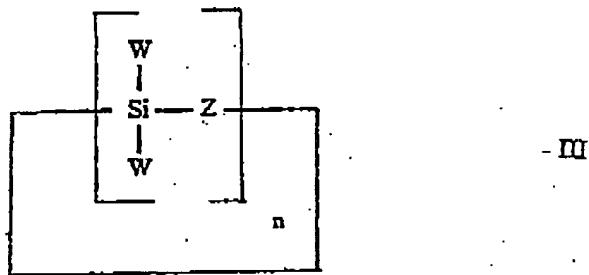
5. (Currently amended) The process copolymer of claim 4 wherein said polysilane of Formula II is a branched polyhydrosiloxane of the formula:

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6. (Currently amended) The process copolymer of claim 21 claim 1 wherein said silane polymer is a polysilane of the formula III:

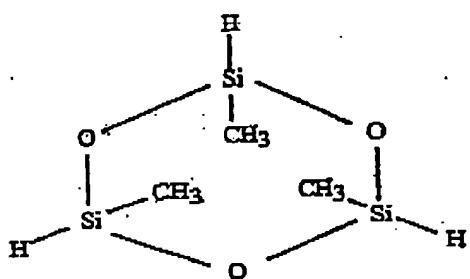


wherein W is an organic or inorganic group selected such that the polysilane contains at least two Si-H groups and sufficient to provide a branched structure, and n is the number of repeating groups in the chain.

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7. (Currently amended) The process copolymer claim 6 wherein said polysilane is a cyclic polyhydrosiloxane of the formula:



8. (Cancelled)

9. (Cancelled)

10. (Currently amended) A branched [[The]] copolymer of polypropylene (PP) and methylhydrosiloxane-dimethylsiloxane random copolymer (MDMS) produced by melt phase hydrosilylation, wherein the ratio of PP to MDMS is such that the polymer contains free Si-H groups, said copolymer being claim 9 which is coupled, through free Si-H groups, to an inorganic filler, inorganic surface, a hydroxy-containing polymer, vinyl-containing polymer or other polymer containing functional groups reactive with free Si-H.

11. (Original) The copolymer of claim 10 wherein said coupling is effected by a hydrosilylation reaction or a dehydrogenerative coupling reaction.

12. (Currently amended) A branched [[The]] copolymer of polypropylene (PP) and methylhydrosiloxane-dimethylsiloxane random copolymer (MDMS) produced by melt phase hydrosilylation, wherein the ratio of PP to MDMS is such that the

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polymer contains free Si-H groups and claim 9 wherein the free Si-H groups are cross-linked.

13. (Previously presented) The copolymer of claim 12 wherein free Si-H groups are converted into a Si-OH group by a metal-catalyzed reaction with water and subsequently dehydrogenatively coupling to a second Si-H group.

14. (Original) The copolymer of claim 12 wherein Si-H groups are reacted by dehydrogenative coupling.

15. (Currently amended) A branched [[The]] copolymer of polypropylene (PP) and a methylhydrosiloxane-dimethylsiloxane random copolymer (MDMS) produced by melt phase hydrosilylation, claim 8 which is coupled to metallic, glass, ceramic or other vitreous surface.

16. (Cancelled)

17. (Cancelled)

18. (Original) A process of forming a branched polypropylene, which comprises effecting melt phase hydrosilylation of a terminally-unsaturated polypropylene in the presence of a methylhydrosiloxane-dimethylsiloxane random copolymer (MDMS).

19. (Original) A process of forming a branched polypropylene, which comprises: effecting hydrosilylation at a vinyl end of polypropylene with a trialkoxysilane to form a functionalized polymer, and thereafter effecting post-reaction branching of the functionalized polymer by reacting Si-OR groups to form a Si-O-Si bridge.

20. (Cancelled)

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21. (Previously presented) A process of forming a branched copolymer, which comprises:

treating a polyolefin with peroxide to provide terminal unsaturation, and

reacting the terminally-unsaturated polyolefin with a silicone polymer containing at least two Si-H groups in a melt phase reactive extrusion hydrosilylation reaction.

22. (Previously presented) The process of claim 21 wherein said polyolefin is polypropylene.

23. (New) The process of claim 18 wherein the ratio of polypropylene to methylhydrosiloxane-dimethylsiloxane random copolymer is such that the polymer contains free Si-H groups.

24. (New) The process of claim 23 wherein said copolymer is coupled, through free Si-H groups, to an inorganic filter, inorganic surface, a hydroxyl-containing polymer, vinyl-containing polymer or other polymer containing functional groups reactive with free Si-H.

25. (New) The process of claims 24 wherein said coupling is effected by a hydrosilylation reaction or a dehydrogenerative coupling reaction.

26. (New) The process of claim 23 wherein the free Si-H groups are cross-linked.

27. (New) The process of claim 26 wherein free Si-H groups are converted into a Si-OH group by a metal-catalyzed reaction with water and subsequently dehydrogenatively coupling to a second Si-H group.

28. (New) The process of claim 26 wherein Si-H groups are reacted by dehydrogenative coupling.

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29. (New) The process of claim 18 wherein said copolymer is coupled to metallic, glass, ceramic or other vitreous surface.